points, but, says Mr. Ridgway, "the material is still far from adequate for a satisfactory treatment of the subject, immense areas of South America and considerable portions of Central America being absolutely unrepresented." One of the results is the discovery that "three very distinct forms of the analis section of the genus occur in Costa Rica," and that the form usually referred to F. analis is really not that species at all, but F. nigricapillus Cherrie, MS., here for the first time described. Of the 12 species recognized by Mr. Ridgway 10 were represented in the material under examination. The provisional name Formicarius nigrifrous glaucopectus is proposed for "three Guiana birds" which appear to differ from true nigrifrons of the Upper Amazon. The probable intergradation of a number of the forms here treated as species is intimated.—
J. A. A.

Stejneger on Japanese Birds.\(^1\)—Of the forty odd species here commented upon eight are given as new to the avifauna of Japan, and five are described as new to science. The latter are \*\mathbb{E}\structure tendence to science. The latter are \*\mathbb{E}\structure tendence to science to the latter are \*\mathbb{E}\structure tendence to science to science to the latter are \*\mathbb{E}\structure tendence to science t

Dr. Stejneger has also an important note on Æstrelata brevipes (Peale), in which he claims that Æ. brevipes is not a synonym of Æ. leucoptera (Gould), as commonly supposed; on the other hand, Procellaria torquata Macgillivray (1860) he finds to be a synonym of Procellaria brevipes Peale (1848). He also finds that the bird previously recorded by him as Æ. leucoptera (Proc. U. S. Nat. Mus. XIV, 1891, p. 490) is the Æ. hypoleuca Salv., as shown by recent examination of authentic material. There are also a couple of pages of critical observations on Yungipicus kizuki and Y. k. seebohmi, and much criticisms of Mr. Seebohm's views on the nomenclature and relationships of Japanese birds.—J. A. A.

Richmond's Notes on Nicaraguan Birds.<sup>2</sup>—So many lists of tropical birds are based on the collections of natives or travellers having little or no knowledge of ornithology, and are therefore accompanied only by

<sup>&</sup>lt;sup>1</sup> Notes on a Third Instalment of Japanese Birds in the Science College Museum, Tokoyo, Japan, with Descriptions of New Species. By Leonhard Stejneger. Proc. U. S. Nat. Mus. XVI, 1893, pp. 615–638.

<sup>&</sup>lt;sup>2</sup> On a Collection of Birds from Eastern Nicaragua and Rio Frio, Costa Rica, with Notes; and a Description of a Supposed new Trogon. By Charles W. Richmond. Proc. U. S. Nat. Mus., XVI, 1893, pp. 479–532.

technical remarks, that Mr. Richmond's well-aunotated paper is doubly welcome. His collections and observations were made between Feb. 1, 1892, and Jan. 19, 1893, all but three months of this time being passed in Nicaragua on the Escondido River, fifty miles from Bluefields.

The results of a study of his specimens, in connection with the collections of the United States National Museum, as set forth in this paper, are as follows: Trogon chrysomelas, a form allied to Trogon atricollis tenellus, is described as new; Eleopicus Bp. is substituted for Dendrobates Swains., 1831, preoccupied by Dendrobates Wagler, 1830 (Batrachia). A series of 17 specimens of Porzana cinereiceps Lawr. apparently shows that Porzana leucoguster Ridgw. is founded on individual variation in that species. No reason is given for relegating the Tinamous to their ancient position between the Quails and Plovers, while Tanagra palmarum is presumably a slip for Tanagra palmarum melanoptera.

The results of Mr. Richmond's studies of living birds are too numerous to be mentioned within the limits of a brief review. His list includes 242 species of land-birds, and 39 species of water-birds. Concerning the habits of many of these he makes numerous interesting and valuable observations. He considerably extends the range of several species, e. g., Progne subis hesperia, Myrmelastes lawrencii, and Panyptila cayennensis; gives the dates of arrival of many species of North American migrants, and makes some suggestive remarks on the movements of tropical birds. Being present during the breeding season he had an opportunity to study the nesting habits of some species, and he remarks (p. 482) "it is interesting to note that in the tropics many species lay but two eggs," a statement supported by his experience with Merula grayi, Rhamphocelus passerini, Oryzoborus furnereus, Embernagra striaticeps, Glyphorhynchus cuneatus, and other species.

The biographical notes are evidently based on the careful observations of a skilled observer, and the paper is therefore an important contribution to our limited knowledge of the life-histories of tropical birds.—F. M. C.

Ogilvie-Grant's 'Catalogue of the Game Birds.'—In Volume XXII of the British Museum Catalogue of Birds Mr. Ogilvie-Grant gives us a most welcome contribution to the history of the Game Birds of the World. As here treated they constitute four 'orders', namely, (1) the Pterocletes or 'Pigeon-Grouse,' more commonly known as Sand-Grouse, comprising 3 genera and 17 species; (2) the Gallinæ, divided into two suborders, the first, Alectoropodes, including all of the true gallinaceous birds, and the

¹ Catalogue | of the | Game Birds | (Pterocletes, Galline, Opisthocomi, Hemipodii) | in the | Collection | of the | British Museum. | By | W. R. Ogilvie-Grant. | London: | Printed by order of the Trustees. | Sold by | Longmans & Co., 39 Paternoster Row; | B. Quaritch, 15 Piccadilly; Dulau & Co., 37 Soho Square, W.; | Kegan Paul & Co., Paternoster House, Charing Cross Road; | and at the | British Museum (Natural History), Cromwell Road, S. W. | 1893. = Catalogue of the Birds in the British Museum, Volume XXII. 8vo., pp. xvi + 585, pll. viii.